AMENDMENTS TO THE CLAIMS

Please amend claim 36 as follows.

1. (Original) A method for the detection of reverse transcriptase (RT) activity in a test sample, said method comprising the steps of:

a) contacting the test sample with an RNA template and an oligonucleotide that is complementary to portion of the RNA template under conditions which allow the oligonucleotide and the RNA template to anneal and such that a DNA strand will be synthesized by extension from the oligonucleotide if reverse transcriptase is present in the sample;

b) subjecting the resulting mixture to a treatment whereby any DNase present in the mixture is substantially inactivated;

c) amplifying the synthesized DNA by use of a DNA polymerase, under conditions whereby the amplified DNA may be detected by incorporation or release of a label; and

d) detecting any amplified DNA by way of the incorporation or release of the label.

2. (Original) The method according to claim 1 wherein the reverse transcriptase activity detected is derived from a retrovirus.

3. (Original) The method according to claim 2 wherein the retrovirus detected is selected from the group consisting of FeLV, HIV and porcine endogenous retrovirus.

4. (Original) A method according to claim 3 wherein the retrovirus detected is porcine endogenous retrovirus.

5. (Previously presented) A method according to claim 1 wherein the test sample comprises biological tissue or body fluid.

6. (Original) A method according to claim 5 wherein the test sample is selected from the group consisting of cells, serum, plasma, semen, urine, saliva, sputum and cerebrospinal fluid.

7. (Previously presented) A method according to claim 6 wherein said test sample is processed in a suitable manner in order to prepare the sample for testing.

8. (Previously presented) A method according to claim 1 wherein an induction step is included prior to assaying the sample in order to stimulate retrovirus production.

9. (Previously presented) A method according to claim 1 wherein amplification of the synthesized DNA is carried out under conditions such that during amplification, a probe comprising an oligonucleotide, possessing a reporter molecule and a suppressor molecule, anneals to a strand of the template nucleic acid and whereby nuclease activity of the DNA polymerase cleaves one of said suppressor molecule and said reporter molecule from the probe and the non-suppressed reporter molecule is detected.

10. (Original) A method according to claim 9 wherein the reporter molecule is a fluorescent molecule.

11. (Previously presented) A method according to claim 10 wherein the reporter molecule is FAM (6carboxyfluoresceine).

12. (Previously presented) A method according to claim 9 wherein the suppressor molecule is TAMRA (6-carboxy-N, N, N', N'-tetramethyl rhodamine).

13. (Previously presented) A method according to claim 9 wherein the complementary oligonucleotide bears FAM at its 5' end and TAMRA at its 3' end.

14. (Original) A method according to claim 1 wherein the DNase inactivation step is a high-temperature protein denaturation step.

15. (Original) A method according to claim 14 wherein the DNase inactivation step comprises holding the reaction mixture at a temperature of at least 90°C for a time of at least 5 minutes.

16. (Original) A method according to claim 15 wherein the DNase inactivation step comprises holding the reaction mixture at a temperature of at least 95°C for a time of at least 10 minutes.

17. (Original) A method according to claim 1 wherein the DNase inactivator is a proteinase.

18. (Original) A method according to claim 1 wherein the known RNA template lacks telomerase target sequences.

19. (Original) A method according to claim 18 wherein the known RNA template is selected from the group consisting of Brome Mosaic Virus (BMV) RNA, bacteriophage MS2 RNA and genomes of RNA viruses with no DNA intermediate.

20. (Original) A method according to claim 1 wherein the reverse transcriptase reaction is carried out at a pH of above 5.5 and below 8.5.

21. (Original) A method according to claim 20 wherein the pH is about 8.2.

22. (Original) A method according to claim 1 wherein the known RNA template is at a concentration of less than 6 ng/μl in the reaction mix.

23. (Original) A method according to claim 22 wherein the known RNA template is at a concentration of less than 1.5 ng/μl in the reaction mix.

24. (Original) A method according to claim 1 wherein said method includes a suppressor of reverse transcriptase activity of DNA polymerases.

25. (Original) A method according to claim 24 wherein the suppressor of reverse transcriptase activity of DNA polymerases is activated DNA.

26. (Original) A method according to claim 25 wherein the suppressor is activated calf thymus DNA (acT DNA).

27. (Previously presented) A method according to claim 24 wherein the suppressor is included in the reaction mix in excess of a known RNA template.

28. (Original) A method according to claim 27 wherein the ratio of activated calf thymus DNA to known RNA template is at least 1:26.

29. (Original) A method according to claim 1 wherein the concentration of activated calf thymus DNA in a reverse transcriptase reaction mix is at least 150 ng/μl.

30. (Original) A method according to claim 1 wherein activated calf thymus DNA is used to further reduce interference from cellular polymerases and to enable a test operated to distinguish between retroviral reverse transcriptase activity and high levels of DNA polymerase activity in a sample.

31. (Original) A kit for use in the detection of reverse transcriptase activity in a sample, said kit including a combination of the necessary reaction reagents, oligonucleotides, RNA templates, activated DNA and the like for use in the methods outlined above.

32. (Original) A kit according to claim 31 wherein said kit is used in the detection of porcine endogenous retrovirus (PoERV) in a test sample.

33. (Original) A kit according to claim 32 wherein said kit includes a porcine endogenous retrovirus specific RNA template.

34. (Original) A kit according to claim 33 wherein the PoERV RNA template is synthesized in vitro and corresponds to a sequence encompassing the positions 805 to 902 of the PoERV genome.

35. (Original) A kit according to claim 34 wherein the oligonucleotide are PoERV-gag-specific oligonucleotides derived from sequences which correspond to approximate positions 805-823 (forward), to positions 828-854 (probe) and positions 902-877 (reverse) on the PoERV genome.

36. (Currently amended) A kit according to claim 35 wherein the oligonucleotide primers for the amplification are:

Forward primer 5′-CCGGCTCTCATCCTGATCA-3′ (SEQ ID NO.1)

Reverse primer 5′-TCTTGGTTTATTTAGCCATGGTTTAA-3′ (SEQ ID NO.2)